

ENGINEERING

Clean Sky 2 LifeRCraft, at the end of the first official milestone

Preliminary design completed successfully



A year after the successful launch of the Clean Sky 2 European research program, the core partners, including INCAS and S. Romaero S.A (Romanian Consortium - RoC for Fuselage Manufacturing for LifeRCraft Compound Helicopter (RoRCraft) - Clean Sky 2) which are involved in the development of the high-speed compound helicopter demonstrator LifeRCraft, conclude the first official milestone of the project by completion of the pre-design phase.

The LifeRCraft architecture combines fixed wings for energy-efficient lift, open propellers for high-efficiency propulsion, and a main rotor that provides vertical takeoff and landing flight capabilities.

The aim of the pre-design was to verify the consistency of the subsystem specifications and interfaces with the general vehicle specifications.

Airbus Helicopters, the project leader, tested a mock-up of the break-



through airframe design in one of its wind tunnels. The tests proved the viability of the design in terms of efficiency, sustainability and performance. A preliminary review of the overall project is planned by the end of this year.

The activities will continue in 2017 with two Critical Design Reviews of the fuselage, based on the work performed by the Core Partners in charge of fuselage structure (RoRCraft). The manufacturing phase will start after the second review. A flight-testing of the LifeRCraft prototype is scheduled in early 2019.



Romanian Consortium - RoC

Starting 2015, INCAS together with S. Romaero S.A, the Romanian Consortium (RoC), participates in the Development of the future European helicopter - Fast RotorCraft, mainly in the Fuselage Manufacturing for LifeRCraft Compound Helicopter (RoRCraft).

The main objective of the RoRCraft project is to make usage of the consortium unique capabilities for design, manufacturing and testing of the fuselage for LifeRCraft Demonstrator in the Clean Sky 2 JTI, in order to demonstrate TRL 6 using innovative tools, methods and manufacturing processes. RoC is in charge with the project management, advanced airframe design, fuselage manufacturing and permit-to-fly.